

Al Child

communication section to be connected to a second electronic device of a signal receiving side; an authentication section for executing an authentication process with the first electronic device and supplying key information for decryption; a decryption section for executing a decryption process of an encrypted signal supplied from the first electronic device based on the key information from the authentication process; and a supply section for directly supplying the encrypted signal from the first electronic device and the key information to the second communication section to avoid signal delay by the authentication.--

IN THE CLAIMS

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~~Please amend claims 1-17 by rewriting same to read as follows:~~

--1. (Amended) An electronic transmission device, comprising:

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first and second communication means to be connected to a signal transmission line;

authentication process means for executing a first authentication process with a first electronic device of a signal transmitting side through at least said first communication means;

decryption means for decrypting an encrypted signal; and processing means for executing an operation process with a signal obtained by decrypting said encrypted signal at said

decryption means, wherein

 said authentication process means supplies key information for decrypting said encrypted signal supplied from said first electronic device based on a result of said first authentication process;

 said first communication means supplies said encrypted signal supplied from said first electronic device connected through said signal transmission line to said decryption means and said second communication means; and

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 said second communication means enables a connected second electronic device of a signal receiving side to transmit said encrypted signal and said key information and to execute a second authentication process with said second electronic device.

--2. (Amended) The electronic transmission device according to claim 1, wherein

 said authentication process means supplies said key information for authentication of said second electronic device and decryption of said encrypted signal from said first electronic device to said second electronic device based on said result of said first authentication process.

--3. (Amended) The electronic transmission device according to claim 1, further comprising:

 encryption means for encrypting said decrypted signal in said decryption means and supplying said encrypted signal to

said second communication means; and

signal selection means for selecting one of said encrypted signal from said first communication means and said encrypted signal from said encryption means in said second communication means.

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--4. (Amended) The electronic transmission device according to claim 3, wherein

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said authentication process means executes said second authentication process with said second electronic device through said second communication means and supplies said key information to said second electronic device for decrypting said signal selected by said signal selection means based on said result of said second authentication process.

--5. (Amended) The electronic transmission device according to claim 4, wherein

a signal selecting operation of said signal selection means is executed based on a selection signal supplied from said first electronic device through said first communication means.

--6. (Amended) The electronic transmission device according to claim 4, further comprising:

operation input means for conducting a switching operation of said signal selection means.

--7. (Amended) A signal transmission method, comprising the steps of:

executing a first authentication process with a first electronic device of a signal transmission side connected through a signal transmission line for connecting said first electronic device and a second electronic device;

executing operation processing by using a signal obtained by decrypting a first encrypted signal supplied from said first electronic device with key information supplied from said first electronic device based on a result of said first authentication process;

executing a second authentication process with said second electronic device for one of signal reception connected through said signal transmission line and execution of a relay for said second authentication process;

transmitting said first encrypted signal supplied from said first electronic device; and

transmitting said key information for decrypting said first encrypted signal based on a result of said second authentication process.

--8. (Amended) The signal transmission method according to claim 7, further comprising the steps of:

re-encrypting said decrypted signal into a second encrypted signal; and

transmitting one of said second encrypted signal and said first encrypted signal supplied from said first electronic

device by selection.

--9. (Amended) The signal transmission method according to claim 8, wherein

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 said key information to be supplied to said second electronic device is key information for decrypting said encrypted signal transmitted to said selected second electronic device.

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--10. (Amended) The signal transmission method according to claim 8, wherein

 said selection of one of said first encrypted signal and said second encrypted signal supplied from said first electronic device is executed based on a selection signal supplied from said first electronic device.

--11. (Amended) The signal transmission method according to claim 8, wherein

 said selection of one of said first encrypted signal and said second encrypted signal supplied from said first electronic device is executed based on an operation result of operation input means.

--12. (Amended) An electronic signal transmission device, comprising:

 first communication means to be connected to a first electronic device of a signal transmitting side;

second communication means to be connected to a second electronic device of a signal receiving side;

authentication means for executing a first authentication process with said first electronic device and supplying key information for decryption;

decryption means for executing a decryption process of an encrypted signal supplied from said first electronic device based on said key information from said first authentication process; and

supply means for supplying said encrypted signal from said first electronic device and said key information to said second communication means.

--13. (Amended) The electronic transmission device according to claim 12, wherein

 said first authentication process means supplies said key information for authentication of said second electronic device and decryption of said encrypted signal from said first electronic device to said second device based on a result of said first authentication process.

--14. (Amended) The electronic transmission device according to claim 12, further comprising:

 encryption means for encrypting said decrypted signal from said decryption means and supplying said encrypted signal to said second electronic device; and

 signal selection means for selecting one of said